

treated as the “intelligence” of the incorporation process procedures in the public health system. Efficacy refers to the benefic effect in experimental conditions; effectiveness mentions the benefic effect operating under the system's conditions, i.e. the action field; and cost-effectiveness refers to the objective when confronted with the costs involved in bringing the procedure into the system. **CONCLUSIONS:** The evidence researched by the HTA area, and not individual medical decisions or judicial sentences, should lead the policies on public health. The need to study the process of judicialization of health through HTA is evident.

#### PHP142

##### THE IMPACT OF THE ASEAN COMMUNITY AND THAILAND'S MEDICAL HUB ASPIRATION ON THE THAI HEALTH CARE SYSTEM

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The Association of Southeast Asian Nations or ASEAN consists of ten member states. In 2007, the ASEAN leaders determined that the ASEAN Community will be established by 2015. The ASEAN Community will become a region with free movement of goods, services, investment, skilled labor, and freer flow of capital. Since the trend in medical tourism continues growing worldwide, countries in ASEAN are strongly encouraging medical tourism as well. In particular, the Thai government is promoting Thailand as a major medical hub in Asia as part of an effort to expand and diversify exports. Thailand aims to make itself the leading medical hub and the center for medical tourism. In this paper, the establishment of the ASEAN Community together with the transformation of Thailand as a medical hub is evaluated. There are some concerns for both Thai and international patients who will receive Thai health care services. The increased number of international patients from becoming a medical hub along with the forming of the ASEAN Community would affect pharmaceutical costs in Thailand and put extra strain on its health care system. In addition to the escalated number of foreign patients, the shortage of health care professionals and the problem of their distribution in the country would be exacerbated. Last, this paper discusses proposed alternatives for the issue. One alternative solution that might diminish the effect of rising pharmaceutical costs to Thai patients is that the Thai government needs to negotiate with pharmaceutical firms producing brand-name medicine on behalf of Thai public hospitals. To reduce the shortage of the health care professionals in Thailand, the restrictions on foreign health care professionals should be loosened.

#### PHP143

##### MULTI CRITERIA DECISION ANALYSIS METHODS IN HEALTH CARE: CURRENT STATUS, GOOD PRACTICE AND FUTURE RECOMMENDATIONS

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**OBJECTIVES:** There has been increase in the number of multi-criteria decision analysis (MCDA) applications in health care since 1990s but there is still confusion among potential users regarding their appropriate use and this paper reports on an expert MCDA meeting organised to address these issues. **METHODS:** An expert meeting was held in 2013 in UK with 21 representatives from a variety of governmental, academic and pharmaceutical institutes, which had the objective to discuss the role, options and limitations of MCDA in health. **RESULTS:** The key messages and good practice recommendations developed by the participants of the expert meeting are as follows: a) Problem structuring is key: it is recommended that enough time is allocated to understand and specify the decision problem under consideration, b) Numerical MCDA modelling is not always necessary: deliberative discourse with the performance matrix as a starting point is sufficient in some situations rather than numerical MCDA models, c) Variety of weighting and scoring techniques: There are a number of different methods to estimate the value scores and to elicit the weights but not all scoring methods and weighting techniques are suitable for every MCDA method, d) Visualisation/transparency is important: For the decision makers to have confidence in the MCDA model, the model outputs need to be adequately visualised and the model needs to be transparent, e) Uncertainty modelling: appropriate care needs to be taken in performing uncertainty analysis **CONCLUSIONS:** MCDA has already been used and is well suited to support a broad range of health care decision problems but there is a need to develop a framework to select the appropriate MCDA technique for specific health care decisions. Future work is underway to develop the guidelines for choosing the most appropriate MCDA method to be applied for a given health care decision problem.

#### PHP144

##### PERSONALIZED DRUG DEVELOPMENT: STRATEGIC AND OPERATIONAL INSIGHTS FOR BIOPHARMA, PAYERS AND PROVIDERS FROM A LARGE SURVEY OF UNITED STATES AND EU DECISION MAKERS

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**OBJECTIVES:** As the US health care system drives toward population-level goals for efficiency and effectiveness, demand persists for more personal care at the patient-level. Personalized medicine is an emerging business model that harnesses genomics and biotechnology aimed at tailoring therapies and interventions to individual patient characteristics. Market stakeholders universally acknowledge the tectonic shift away from the historic blockbuster drug model to a more targeted model. To evaluate current insights and challenges, we surveyed key stakeholders and decisions makers across the health care industry. **METHODS:** We conducted a survey of approximately 300 biopharma executives, payers, and providers in the US and EU to gain insight into their needs, perceptions, and readiness to shift toward a more robust personalized medicine approach. This original research is aimed to characterize current status of infrastructure, preparedness, adoption and value assessment around personalized medicine development and highlight key chal-

lenges and opportunities. **RESULTS:** Only 22%-27% of payers and providers believe that personalized medicine is a “very important” strategic goal versus ~50% of large biopharma manufacturers. Although 47%-52% of all stakeholders have integrated staff with area expertise, fewer than 20% have developed a centralized focus on personalized medicine and only 8%-20% believe they have tools to evaluate its success. Decision maker perspectives ranged broadly on its key benefits but included improved and more predictable outcomes and cost efficiencies. Approximately 30% of all stakeholders believe that personalized medicines will continue to receive premium pricing to justify ROI for this business approach. **CONCLUSIONS:** Although most stakeholders see value in personalized medicines, they struggle with practical implementation and need actionable strategies to characterize the value and impact of these technologies. The survey suggests that limited emphasis on infrastructure development and methods, heterogeneous value assessment, and misalignment of incentives remain key challenges to enabling care and economic efficiencies promised by this evolving treatment paradigm.

#### PHP145

##### PREDICTING PRICE-TO-CHARGE RATIOS FOR COMMUNITY HOSPITALS IN THE UNITED STATES

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**OBJECTIVES:** Reliable price data could enable consumers to choose providers that offer better value than others, eventually leading to market-level gains in quality and efficiency. The objective of this study is to predict price-to-charge ratios (PCRs) for community hospital stays on the basis of charge data and information about individual stays, hospitals, market areas, and states. **METHODS:** We used 2006 Healthcare Cost and Utilization Project State Inpatient Databases from California, Florida, Massachusetts, Nevada, New Jersey, Virginia, West Virginia and Wisconsin. We predicted PCRs for major payer categories for over 1,000 community hospitals as a function of state, market, hospital, and patient characteristics using exponential conditional mean models with a log link and gamma-distributed errors. The unit of analysis was the hospital. We used a two-stage iterative estimation in which equations are estimated individually and the errors saved. In the next step, each payer equation is estimated a second time with the first-stage errors of the other payer equations as new independent variables. We assessed goodness of fit through model characteristics and by assessing the match of actual and predicted PCRs. **RESULTS:** Average demographic characteristics were significant predictors of PCRs for Medicare and Private insurance, but not for Medicaid or Self-Pay. Hospital characteristics were related to every PCR category. Critical-access hospitals and teaching hospitals were associated with significantly greater PCRs for Medicare, Medicaid, and Private insurance holders. Greater numbers of Medicare and Medicaid discharges were associated with significantly lower PCRs. Higher PCRs were most often associated with worse economic conditions and greater state generosity in Medicaid eligibility and spending. **CONCLUSIONS:** Inpatient encounter prices paid by Medicare, Medicaid, and private insurance can be estimated with acceptable accuracy for community hospital stays. Stays funded by other insurance types or by patients were harder to predict and simultaneously have almost no correlation with PCRs.

#### PHP146

##### NUTRITION PHARMACO-ECONOMICS: SPECIFICITIES AND CHALLENGES

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**BACKGROUND:** Over the last decade, evidence-based assessment of food and nutritional products has substantially accelerated, in a fast-moving market and regulatory environment. Specific evidence synthesis, epidemiological and pharmacoeconomic tools have been increasingly required, developed and used for HTA and public health decision support. **OBJECTIVES:** This presentation highlights through case studies the specific needs, tools and challenges arising from health economic evaluations of nutritional products. **METHODS:** To first set the scene of nutritional product assessment, the regulatory and HTA systems and guidelines in both Europe and the US will be described and potential differences with drugs or devices highlighted. Through a series of illustrative but representative case studies covering both health claims and medical nutrition, the specific data needs and statistical methods to analyse them will be reviewed and discussed. Data and methods gaps will be highlighted and consequences on the market access strategies and tactics will be discussed. **RESULTS:** Nutritional products would typically target a wider and heterogeneous group of population than common drugs. Furthermore, control of food/compound exposure and effect in observational and clinical studies is more challenging resulting in larger studies and requiring more stringent tracking of compliance. Data analysis then requires refined statistical models such as hierarchical models able to handle population variability. Safety issues are also expected to be minimal to make benefit/risk evaluation acceptable by regulators, so that risk studies and risk management tactics should be designed accordingly. Finally, pricing and reimbursement depend even more than drugs on how the compound is positioned and for which target population. **CONCLUSION:** Standard tools for evidence synthesis and pharmacoeconomic tools applied to nutritional products market access need to be stretched to their best to handle the higher population heterogeneity and numerous market access options.

#### PHP147

##### A SYSTEMS-THINKING APPROACH FOR THE HEALTH CARE INDUSTRY: AN ATTITUDINAL SURVEY OF BIOPHARMA, PAYERS AND PROVIDER STAKEHOLDERS

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